

Gsb = Calculated combined bulk specific gravity of various mineral aggregates used in mixture, and

Y = Percent by weight of fiber.

Material produced for the demonstration will not be paid for but the cost will be incidental to the item GGHMA.

506.04.01 Price Adjustment. Refer to 504.04 except as follows:

DENSITY PRICE ADJUSTMENT	
PERCENT OF MAXIMUM DENSITY, LOT AVERAGE	PAY FACTOR %
Above 97.0	97
94.0 - 97.0	100
92.0 - 93.9	97
90.0 - 91.9	95
Below 90.0	80 or Rejected at Engineer's Discretion

Note: Any subplot below 89.0 percent will be cause for rejection of the entire lot at the Engineer's discretion.

SECTION 507 — SLURRY SEAL

507.01 DESCRIPTION. This work shall consist of constructing a slurry seal course using a slurry seal (SS), or a latex modified slurry seal (LMSS) as specified in the Contract Documents or as directed by the Engineer.

507.02 MATERIALS.

Mineral Filler	901.01
Water	921.01
Aggregate	923.01
Emulsified Asphalt	923.03
Latex Modified Emulsion	923.04

507.03 CONSTRUCTION.

507.03.01 Weather Restrictions. The slurry seal shall only be placed when the air and surface temperatures are a minimum of 50 F, when it is not raining, and when the local weather forecast does not predict

precipitation or the temperature to fall below 40 F within 24 hours from the time the mixture is placed.

When the surface or air temperature falls below the specified limits, placement of the mix shall cease. Material en route may be placed at the Contractor's risk.

507.03.02 Mixing Equipment. Slurry seal shall be produced in a self-propelled, front feed, continuous loading mixing machine. The unit shall proportion and deliver the materials to a revolving, multiblade, shafted mixer and discharge it continuously and uniformly.

The mixer shall have devices that control the proportioning of each material at all times. The mixer shall be calibrated for the mix design in the presence of an Administration representative, or certified calibration documents may be accepted by the Engineer. The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, additives, and water to maintain an adequate supply of the materials for the proportioning controls.

Mixing machines shall be equipped with water pressure systems and nozzle spray bars to provide a water spray ahead of and outside the spreader box when required. Mineral filler shall be added to the aggregate in the proper amount before introduction into the mixer.

Truck mounted machines with positive, nonslipping aggregate delivery systems, but without a front feed continuous loading feature, may be used on project segments of less than 15 000 yd² or for spot repair projects.

When truck mixing machines are used, a minimum of two shall be on the project prior to construction.

507.03.03 Spreading Equipment. Slurry seal shall be spread uniformly by means of a mechanical squeegee box attached to the mixer and equipped with paddles mounted on an adjustable shaft to continuously agitate and distribute the materials. The equipment shall provide sufficient turbulence to prevent the mix from setting in the box or causing excessive side buildup or lumps. The Contractor shall attach flexible seals to the box in contact with the road, front and rear, to prevent loss of the mixture. Spraying of additional water into the spreader box is prohibited.

507.03.04 Surface Preparation. The surface shall be clean, dry and free of all objectionable materials prior to applying the tack coat and slurry seal.

A tack coat consisting of one part asphalt emulsion to three parts water shall be applied to all surfaces unless otherwise directed by the Engineer. The tack coat shall be the same emulsion type and grade as used in the slurry seal. The application rate shall be 0.05 to 0.10 gal/yd² or as determined by the Engineer.

507.03.05 Application. Slurry seal shall be spread to repair slight irregularities and achieve a uniform, skid resistant surface without skips, lumps or tears, as determined by the Engineer.

The Contractor shall use squeegees and lutes to spread the mixture in areas inaccessible to the spreader box and areas requiring hand spreading.

When hand spreading is necessary, additives may be used to provide slower setting time. The SS and LMSS shall be poured in a small windrow along one edge of the surface to be covered and then spread uniformly. A smooth, neat seam shall be constructed where two passes meet. Excess material shall be removed immediately from the ends of each run.

- (a) **Slurry Seal.** The SS shall be applied at the rate of 16 ± 2 lb/yd² for Type II Mix and 20 ± 2 lb/yd² for Type III Mix, based on the dry aggregate weight, unless otherwise specified in the Contract Documents.
- (b) **Latex Modified Slurry Seal.** The LMSS shall be applied in one or two lifts as directed by the Engineer.

For roadways specified to receive one application, the LMSS shall be applied at the rate of 16 ± 2 lb/yd² for Type II Mix and 22 ± 2 lb/yd² for Type III Mix, based on the dry aggregate weight, unless otherwise specified in the Contract Documents.

When two applications are specified, the material shall be applied at the combined rate of 28 ± 2 lb/yd² for Type II Mix and 32 ± 2 lb/yd² for Type III Mix.

507.03.06 Certification. Certified weight tickets shall be furnished to the Engineer for the emulsion, latex emulsion, aggregate, and mineral filler used to ensure specified application rates.

507.03.07 Sampling and Testing. The Contractor shall sample the mixtures at least once daily during paving. Each sample shall be placed in a 1 gal container. Samples shall be submitted to the Regional Laboratory for testing. Residual asphalt content, gradation, stability and

flow shall be determined for SS and LMSS in conformance with T 30, T 164 and T 245, Modified.

507.03.08 Tie-Ins for Entrances and Connecting Roads. Tie-ins shall be made at entrances and connecting roads as directed by the Engineer.

507.03.09 Traffic. SS and LMSS shall be capable of curing at rates that will permit traffic on the pavement within two hours and one hour, respectively after application, without damaging the surface. Any damage to the SS or LMSS caused by traffic shall be repaired by the Contractor at no additional cost to the Administration.

507.04 MEASUREMENT AND PAYMENT. Slurry Seal and Latex Modified Slurry Seal will be measured and paid for at the Contract unit price per square yard for one or more of the pertinent items listed below. The payment will be full compensation for furnishing and placing the aggregate, tack coat, tie-ins to entrances and connecting roads, mineral filler, emulsion, latex emulsion and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

507.04.01 Slurry Seal Using Type II Mix (One Coat).

507.04.02 Slurry Seal Using Type III Mix (One Coat).

507.04.03 Latex Modified Slurry Seal Using Type II Mix (One Coat).

507.04.04 Latex Modified Slurry Seal Using Type III Mix (One Coat).

507.04.05 Latex Modified Slurry Seal Using Type II Mix (First Coat).

507.04.06 Latex Modified Slurry Seal Using Type III Mix (Second Coat).

507.04.07 Price Adjustment. Material not conforming to these Specifications may be accepted at a reduced price if the Engineer determines that it is not detrimental to the work. The following price adjustment will apply:

- (a) The residual asphalt content of samples will be averaged for each day's production per lift and will be compared to the mix design submitted by the Contractor. A one percent reduction in Contract unit price per square yard will be applied for each 0.10 percent the asphalt content is out of tolerance.
- (b) The Contract unit price per square yard will be reduced 0.5 percent for each gram per square foot of Wet Track Abrasion Test loss between 75 and 100 grams in conformance with

MSMT 403. Material having a loss greater than 100 grams will be rejected.

- (c) For applications less than the specified rate, the Contract unit price per square yard will be reduced three percent for each pound per square yard below the specified rate. This adjustment will be determined by comparing the certified delivery tickets with the project Specifications. Material applied at more than the specified rate will not be considered for payment.

SECTION 508 — MILLING HOT MIX ASPHALT PAVEMENT

508.01 DESCRIPTION. This work shall consist of milling the hot mix asphalt (HMA) pavement to the depth and at the locations specified in the Contract Documents or as directed by the Engineer.

508.02 MATERIALS.

Hot Mix Asphalt (HMA)

904

508.03 CONSTRUCTION. Roadway patching shall be performed before the milling operation. Additional roadway patching may be required after the milling operation to correct pavement defects made visible by the milling operation. Refer to Section 505 for HMA Patches.

508.03.01 Equipment. The machine for removing the asphalt pavement shall be a power operated planing machine or grinder capable of removing, in one pass, a layer of asphalt pavement not less than half the lane width to be removed. The machine shall be capable of accurately establishing profile grade control and shall have positive means for controlling slope elevation. The resultant surface shall be true to the established grade and shall be skid resistant. Unless otherwise directed by the Engineer, a tolerance of $\pm 1/8$ in. when using a 10 ft straightedge supplied by the Contractor shall be maintained. The machine shall be capable of preventing dust from escaping into the atmosphere.

508.03.02 Pavement Milling. The milling operation shall be performed in only one lane at a time. When milling highways carrying traffic, all milling exceeding 2-1/2 in. shall have the abutting lane or shoulder milled on the same day. When milling to a depth of 2-1/2 in. or less, the Contractor has the option of milling the abutting lane or shoulder on alternate days. The abutting lane or shoulder shall be milled regardless of depth prior to weekends or temporary shutdowns. Where uneven pavement joints exist, the Contractor shall provide adequate advance